

REMARKS/ARGUMENTS

Claims 1-27 are pending in the captioned application. Claims 1-13 and 21-27 have been withdrawn as belonging to non-elected restriction groups and/or species. Claim 14 has been amended to include the limitations of non-elected claim 7. Claim 19 has been amended to correct a typographical error. Applicants also introduce new claim 28, containing the species (subgroup 3 – 60 libraries grouped into three groups of 20 libraries with specified amino acids at -1, and +3 and +6 positions, respectively) of which the Examiner indicated that is not found in the prior art (paragraph 4, page 2 of Office action). Applicants respectfully request reconsideration and allowance of claims 14-20 and 28, in view of the amendments above and the arguments herein below.

The Examiner states that the list of references cited in the specification has not been properly submitted in an IDS, and therefore have not been considered. In response, Applicants submit concurrently herewith an IDS (form PTO-1449) listing the references and respectfully request that the Examiner consider these references. Also submitted herewith are copies of the non U.S. patents and non U.S. published applications cited on the PTO-1449. Applicants respectfully request the Examiner's consideration.

The specification has been amended to correct the title, to insert a cross reference to the related priority applications and to insert the "Brief Description of the Drawings" section. These amendments do not introduce new matter.

The claims have been objected to by the Examiner as containing hybrid claims, since claim 14 is dependent on non-elected claim 7. In response, Applicants have amended claim 14 to incorporate the limitations of the non-elected claim 7.

Claims 14-20 have been rejected by the Examiner under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

The Examiner states that for independent claim 14, "the phrase 'providing a set of libraries of proteins as defined in claim 7' is vague and indefinite". The Examiner continues, "claim 7 discloses, '6 to 20 libraries in each of which libraries said first specified position is randomized and a different amino acid is present at at least one other specified position' in step b) of the claim. However, there is no point of reference to ascertain whether an amino acid is "different" or not at the at least one other specified position".

In response, Applicants respectfully submit that the amended claim 14 no longer contains the objected term (e.g. “a different amino acid”). Applicants submit that as such, the 35 U.S.C. § 112, second paragraph, rejection for indefiniteness is now moot.

Claims 14-17 have been rejected under 35 U.S.C. § 102(b), as being anticipated by Choo et al. (WO 96/06166). In making this rejection, the Examiner states (section 20, page 10): “For example Choo et al disclose a method of identifying a protein that interacts with a specific binding partner”. The Examiner went to great detail in describing Figure 4 of Choo et al. and seemed to base the rejection primarily on the disclosure of Figure 4. Applicants respectfully disagree with the Examiner.

Applicants submit that Choo et al. actually discloses a method of identifying a binding partner that interacts with a specific protein e.g. RSDHLTTHIR, RYDALEAHRH that are subsequently identified by their binding signatures. Applicants submit that what the Examiner regarded as Choo's library 1a is merely a collection of two proteins of known sequence and is not a library as defined in Applicants' claimed invention. Similarly, Applicants submit that Choo's libraries 2a, 3a, etc are not libraries as defined in Applicants' claimed invention, either.

Applicants submit that Choo et al. does not disclose providing a set of libraries of proteins, which proteins are capable of specific binding interactions with a specified

binding partner by amino acid residues at at least one specified position including a first specified position and at least one other specified position, which set of libraries comprise randomized amino acid residues. Applicants submit that rather Choo et al. discloses a number of pre-selected proteins (e.g. 33 individual proteins in Fig 4) all derived from a single library, and the binding of these proteins with randomized DNA molecules (binding partner), in order to determine the correct binding sites of the binding partner. Thus, the sequences of the proteins in Choo et al. are known prior to the assay. In fact, what is identified is a specific binding partner from within the oligonucleotide libraries as shown by the dark areas in Figure 4.

In addition, Applicants submit that Choo et al. (page 10, fourth full paragraph) discloses a single library of DNA sequences, for example 64 DNA sequences. Thus, Choo et al. refers to a single library of genes or proteins. By contrast, the present application claims multiple libraries (6 to 20 per fixed position) of genes or proteins to screen against any target. Similarly, Choo et al. refers to multiple libraries of ligands (oligonucleotide libraries, see Figure 4), whereas Applicants refer to only a single ligand (oligonucleotide/specific binding partner).

In view of the above arguments, Applicants respectfully submit that the 35 U.S.C. § 102(b) rejections based on Choo et al. should be withdrawn.

Claims 14-20 have been rejected under 35 U.S.C. § 103 (a), as being unpatentable over Choo et al., or Choo et al. in view of Udenfriend et al. (Anal. Biochem. 1987, 161, 494-500).

Here, the Examiner rejected claims 14-17, again over Choo et al. The Examiner states that since Choo et al. anticipates claim 14-17, it renders obvious claims 14-17. Applicants respectfully disagree. Applicants submit that as discussed above, Choo et al. does not teach the instant invention. As such, Applicants request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejections of claim 14-17.

The Examiner rejected claims 18-20 over Choo et al. in view of Udenfriend et al. Applicants submit that as discussed above, Choo et al. does not teach the invention as claimed in claims 14-17. As such, Applicants submit that the combination of Udenfriend et al. with that of Choo et al. could not render obvious claims 18-20. Applicants request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejections of claim 18-20.

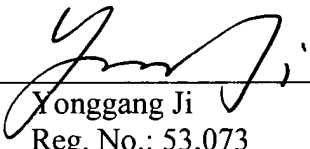
Applicants believe that the above constitutes a complete response to the outstanding office action and claims 14-20 and 28 are now in allowable form.

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Early and favorable action is earnestly solicited.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on January 20, 2006.

Signature: 

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